c) Remarks

The claims are 1, 3-8 and 12 with claims 1 and 12 the independent claims. Claim 12 was previously dependent on cancelled claim 10. Accordingly, the subject matter of claim 10 is added to claim 12. Claim 1 has been amended to better define the intended invention. Reconsideration of the claims is requested.

Claims 1, 3, 5 and 6 were rejected as obvious over Speakman '564 in view of Komatsu '400. Claims 4, 7, 8 and 12 were rejected as obvious over Speakman '564 in view of Komatsu '400 and further in view of the Admitted Prior Art (APR), JP2000 - 318308 (JP '308) cited on specification page 11, lines 1-4. Speakman '564 is said not to teach the colloidal particle having a metal core and an organic substance shell. Komatsu is said to teach the core-shell colloidal particle. The grounds of rejection are respectfully traversed.

Speakman fails, inter alia, to teach the instant step (ii) of drying the colloid layer with IR or hot air to remove both the organic shell and liquid medium in order to anchor the metal colloid particles. Firstly, since Speakman fails to teach a layer of a colloid particle of a metallic core and an organic shell, it fails to teach removal of the organic shell and a liquid medium in order to anchor the metallic core. Second, the disclosure of IR in [0204], [0251], [0252], [0266] and [0479] of Speakman merely mentions infrared radiation especially used to modify the reaction of a droplet to promote material reflow, recrystallization, mixture blending or bulk/profile smoothing, conducted before, during or after deposition. [0257]. Conducting IR exposure on droplets before or during deposition teaches nothing of drying a layer on a substrate containing a metallic colloid. Further, the droplet is not disclosed to have a core-shell structure

with a metallic core and an organic shell. Finally, Speakman fails to teach that a liquid medium penetrates into a porous substrate.

In paragraphs [0252] and [0266] of Speakman it is disclosed that liquid droplets are pre-treated in flight by, inter alia, IR radiation to conduct evaporation/volatilization/energy transfer/in-flight solidification either at the nozzle of an ink-jet head or in the flight path of the droplet. This in-flight feature has nothing to do with removing an organic shell and liquid medium from a deposited layer on a substrate to anchor the metallic core on the substrate. The deficits of Speakman are not remedied by Komatsu '400.

Komatsu, likewise, fails to teach or suggest a part of metal colloidal particles move into pores of a substrate to anchor metal particles on the substance surface. Komatsu merely discloses that ultrafine particles comprising an organic compound sheath and a metal core, are deposited on a nonporous substrate. Thereafter, the particles are sintered (Col. 5, lines 45-55 and Col. 11, lines 15-22) to decompose the organic sheath. Therefore, the combination of Speakman and Komatsu does not teach moving the metal particles into pores of the substrate and drying the solution to remove the organic substance and to anchor the metal particles in the pores to the metal particles on the substrate. A prima facie case of obviousness is not raised.

The claims should be allowed and the case passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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